

**OCT4 (OCT3) Antibody (E125)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP2046c**

**Specification**

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**OCT4 (OCT3) Antibody (E125) - Product Information**

Application	IF,E
Primary Accession	<a href="#">Q01860</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	110-141

**OCT4 (OCT3) Antibody (E125) - Additional Information**

**Gene ID** 5460

**Other Names**

POU domain, class 5, transcription factor 1, Octamer-binding protein 3, Oct-3, Octamer-binding protein 4, Oct-4, Octamer-binding transcription factor 3, OTF-3, POU5F1, OCT3, OCT4, OTF3

**Target/Specificity**

This OCT4 (OCT3) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 110-141 amino acids from human OCT4 (OCT3).

**Dilution**

IF~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

OCT4 (OCT3) Antibody (E125) is for research use only and not for use in diagnostic or therapeutic procedures.

**OCT4 (OCT3) Antibody (E125) - Protein Information**

**Name** POU5F1

**Synonyms** OCT3, OCT4, OTF3

**Function** Transcription factor that binds to the octamer motif (5'- ATTTGCAT-3'). Forms a trimeric

complex with SOX2 or SOX15 on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206. Critical for early embryogenesis and for embryonic stem cell pluripotency.

#### Cellular Location

Cytoplasm. Nucleus. Note=Expressed in a diffuse and slightly punctuate pattern. Colocalizes with MAPK8 and MAPK9 in the nucleus. {ECO:0000250|UniProtKB:P20263, ECO:0000269|PubMed:18191611, ECO:0000269|PubMed:19274063, ECO:0000269|PubMed:23024368}

#### Tissue Location

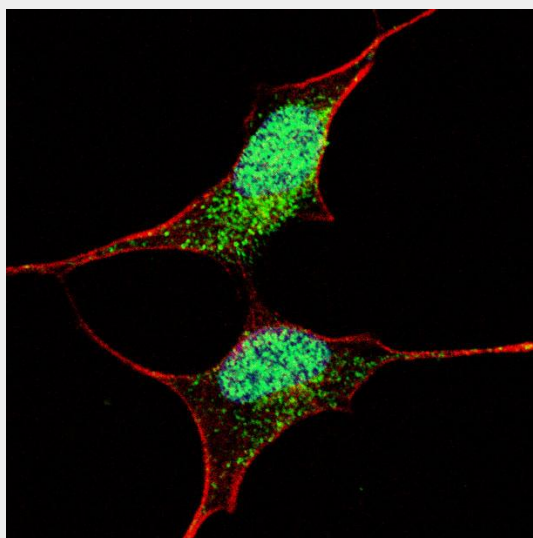
Expressed in developing brain. Highest levels found in specific cell layers of the cortex, the olfactory bulb, the hippocampus and the cerebellum. Low levels of expression in adult tissues.

### OCT4 (OCT3) Antibody (E125) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### OCT4 (OCT3) Antibody (E125) - Images



Fluorescent confocal image of SY5Y cells stained with AP2046c OCT4 (E125) antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min), then incubated with AP2046c OCT4 (E125) primary antibody (1:500, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (5.25  $\mu$ M, 25 min). Nuclei were counterstained with Hoechst 33342 (blue) (10  $\mu$ g/ml, 3 min). OCT4 immunoreactivity is localized mainly to the nuclei and also to the cytoplasm.

### **OCT4 (OCT3) Antibody (E125) - Background**

Transcription factors containing the POU homeodomain have been shown to be important regulators of tissue-specific gene expression in lymphoid and pituitary differentiation and in early mammalian development. Two forms of OCT3 mRNA are expressed in adult tissues as a result of alternative splicing--OCT3A and OCT3B. Reverse transcriptase PCR showed low level of expression in both OCT3A and OCT3B mRNA in all adult human tissues examined. Oct3 is present in mouse oocytes before and after fertilization. When fertilized oocytes were injected with antisense Oct3 oligonucleotides or double-stranded DNA containing the octamer motif, embryonic DNA synthesis was inhibited and the embryos were arrested at the one-cell stage.

### **OCT4 (OCT3) Antibody (E125) - References**

Looijenga, L.H., et al., *Cancer Res.* 63(9):2244-2250 (2003). Remenyi, A., et al., *Genes Dev.* 17(16):2048-2059 (2003). Nichols, J., et al., *Cell* 95(3):379-391 (1998). Crouau-Roy, B., et al., *Genomics* 21(1):241-243 (1994). Takeda, J., et al., *Nucleic Acids Res.* 20(17):4613-4620 (1992).